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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. 1083.1076/JDH

First Named Inventor or Application Identifier:

Tomohito SHIDA

Express Mail Label No.

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: **Assistant Commissioner for Patents**
Box Patent Application
Washington, DC 20231

1. [X] Fee Transmittal Form
2. [X] Specification, Claims & Abstract ..... [Total Pages: 37]
3. [X] Drawing(s) *(35 USC 113)* ..... [Total Sheets: 12]
4. [X] Oath or Declaration ..... [Total Pages: 3]
   a. [X] Newly executed (original or copy)
   b. [ ] Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional with Box 17 completed)*
      i. [ ] DELETION OF INVENTOR(S)
      Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
5. [ ] Incorporation by Reference (usable if Box 4b is checked)
   The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
6. [ ] Microfiche Computer Program *(Appendix)*
7. [ ] Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all necessary)*
   a. [ ] Computer Readable Copy
   b. [ ] Paper Copy (identical to computer copy)
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ACCOMPANYING APPLICATION PARTS

8. [X] Assignment Papers (cover sheet & document(s))
9. [ ] 37 CFR 3.73(b) Statement *(when there is an assignee)* [ ] Power of Attorney
10. [ ] English Translation Document *(if applicable)*
11. [ ] Information Disclosure Statement (IDS)/PTO-1449[ ] Copies of IDS Citations
12. [ ] Preliminary Amendment
13. [X] Return Receipt Postcard (MPEP 503) *(Should be specifically itemized)*
14. [ ] Small Entity Statement(s) [ ] Statement filed in prior application, status still proper and desired.
15. [X] Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
16. [ ] Other:

17. If a CONTINUING APPLICATION, *check appropriate box and supply the requisite information:*

[ ] Continuation [ ] Divisional [ ] Continuation-in-part (CIP) of prior application No: ___/_____

18. CORRESPONDENCE ADDRESS

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NEW APPLICATION FEE TRANSMITTAL		Attorney Docket No.	1083..1076/JDH
		Application Number	TO BE ASSIGNED
		Filing Date	October 23, 2000
AMOUNT ENCLOSED	$1070.00	First Named Inventor	Tomohito SHIDA

FEE CALCULATION (fees effective 12/29/99)

CLAIMS	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
	TOTAL CLAIMS	12 - 20 =	0	X $ 18.00 =	$ 0.00
	INDEPENDENT CLAIMS	7 - 3 =	4	X $ 80.00 =	320.00
	MULTIPLE DEPENDENT CLAIMS (any number; if applicable)			+ $260.00 =	0.00
			BASIC FILING FEE		710.00
			Total of above Calculations =		$ 1030.00
	Surcharge for late filing fee, Statement or Power of Attorney ($130.00)				0.00
	Reduction by 50% for filing by small entity (37 CFR 1.9, 1.27 & 1.28).				- 0.00
			TOTAL FILING FEE =		$ 1030.00
	Surcharge for filing non-English language application ($130.00; 37 CFR 1.52(d))				0.00
	Recordation of Assignment ($40.00; 37 CFR 1.21(h)(1))				40.00
			TOTAL FEES DUE =		$ 1070.00

METHOD OF PAYMENT

[X] Check enclosed as payment.

[ ] Charge "TOTAL FEES DUE" to the Deposit Account No., below.

[ ] No payment is enclosed and no charges to the Deposit Account are authorized at this time.

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SUBMITTED BY: STAAS & HALSEY LLP

Typed Name	James D. Halsey, Jr.	Reg. No.	22,729
Signature		Date	October 23, 2000

TITLE OF THE INVENTION

Method, system, and
apparatus for accepting transaction reservation,
and recording medium

BACKGROUND OF THE INVENTION

The present invention relates to a method for accepting transaction reservation, in which charges to offer products or services are presented on a network, and reservation to pay the above charges for the products or the services is accepted; a system and an apparatus for accepting transaction reservation to execute the above method; and to a recording medium to store computer programs which cause a computer to function as the above apparatus.

In a shop to offer various kinds of products and services, there have been a time zone (hereinafter, called as a quiet time zone) when only a few customers visit there, according to characters of the products or services which are handled there. There may be quiet time zones between breakfast and lunch, and between lunch and supper, for example, in a shop such as a restaurant to offer dishes. On the other hand, a shop such as a supermarket may have quiet time zones during lunch, supper and the like.

However, it may be preferable to shorten such quiet time zone as much as possible in order to efficiently offer

the products or services. Then, there have conventionally been a sale time zone when the products and services are sold at discount prices lower than usual ones in order to shorten the above quiet time zone.

For example, in a shop such as a supermarket, products which should be sold on that day, and left unsold just before the end of business hours have been generally offered as a bargain at a discount price. Thereby, it has been realized to reduce the number of products left unsold to the minimum.

In each shop, there have been performed operations to exchange price tags, price tables, and so on showing usual charges to ones with discount charges to offer such time-limited services and bargain products (hereinafter, called as discount services). And, there have been calling customers in, handing out leaflets, and so on, in front of the shop to advertise that the products or services are offered at discount charges.

However, it is difficult to promptly perform the above exchanging of price tags, price tables, and so on, calling and handing out of leaflets in front of the shop, as they have required much hard labor. Therefore, there have been a problem that it is impossible to change discount charges defined at discount sales into appropriate ones according to momentarily changing conditions.

Similarly, it has been difficult to perform the above operations on a large scale, as much labor has been required. Therefore, there has been a problem that it is impossible for customers to easily obtain information that discount sales are in progress. Accordingly, there has been a problem that it is difficult to level this number of customers in the shop, that is, to shorten the quiet time zones.

Recently, communication networks, for example, the Internet has been rapidly widespread along with development of building up of communication environments, and then, computer systems offering various kinds of services has been realized, using such communication networks. The above computer systems may offer promptly and on a large scale with less labor in comparison with that manual labors.

BRIEF SUMMARY OF THE INVENTION

The present invention has been made, considering the above progress of computer systems, and has an object to provided a method for accepting transaction reservation, in which terms for a transaction target are defined and disclosed on a network, and a lot of customers may promptly have information that discount services are available, by accepting reservation to perform the transaction based on the above terms, and, moreover, to perform reservation for

the discount service; a system and apparatus for accepting transaction reservation to execute the above method; and a recording medium to store computer programs which make a computer function as the above apparatus.

Another object of the present invention is to provide a method for accepting transaction reservation to define appropriate terms according to momentarily changing conditions, by definition of terms for transaction such as a discount rate in a discount service, based on reservation states for the transaction; a system and an apparatus for accepting transaction reservation, and a recording medium for them.

Further another object of the present invention is to provide a method for accepting transaction reservation, in the case of execution of transaction based on specific terms, to perform transaction based on the specific terms only when it is confirmed that the transaction reservation has been actually made, after checking whether the reservation has been made or not; a system and an apparatus for accepting transaction reservation; and a recording medium for them.

Still another object of the present invention is to provide a method for accepting transaction reservation, in the case of confirmation that transaction reservation has been made based on specific terms, to offer favors according

to the above terms instead of performing transactions based on the above terms; a system and an apparatus for accepting transaction reservation; and a recording medium for them.

The method according to a first invention is characterized in that a method for accepting transaction reservation, comprising the steps of: electronically presenting information on transaction favors of a transaction target defined for each time zone to a plurality of customers; electronically accepting information on transaction reservation at a selected time zone by a customer; and performing a transaction with favors for the reserved transaction target, when the visiting time of a customer to a shop, or the finish time of the transaction is included in the time zone in association with said accepted information on transaction reservation.

The method according to a second invention is characterized in that a method for accepting transaction reservation of a transaction target, comprising the steps of: determining terms for a transaction of a transaction; displaying the determined terms for the transaction ; and accepting reservation of transaction of the transaction target based on the displayed terms.

The method according to a third invention is characterized in that, in the method according to a second invention, the step of determining the terms for a

transaction is a step of determining terms for a transaction based on the state of the transaction reservation.

The method according to a fourth invention is characterized in that, in the method according to the second or third invention, the accepting step further comprises a step of confirming whether the reservation has been accepted.

The method according to a fifth invention is characterized in that, a reception method for deal booking according to claim 4, characterized in that it further comprises the following steps: a method according to claim 4, further comprising the steps of: determining favors for the reserved transaction which has been confirmed to be accepted by the confirmation step, based on its terms; and offering the determined favors.

The system according to a sixth invention is characterized that, a system for accepting transaction reservation provided with a plurality of terminal devices, and an apparatus for accepting transaction reservation, connected to the terminal devices respectively, to accept reservation for a transaction of a transaction target, characterized in that said accepting apparatus comprises: (i) a terms determination means for determining terms for a transaction of a transaction target; and (ii) a transaction terms display means for displaying the terms for the

transaction determined by the terms determinations means; said terminal devices comprises: (i) an accepting means for accepting reservation application data which represents reservation application for a transaction of a transaction target based on the displayed terms; and (ii) a transmission means for transmitting the reservation application data accepted by the accepting means to the accepting apparatus; and said accepting apparatus further comprises a storage means for storing received reservation application data, when the reservation application data is received.

The apparatus for accepting transaction reservation to accept reservation application for a transaction of a transaction target, according to a seventh invention is comprising: a terms determination means for determining terms for a transaction of a transaction target; a transaction terms display means for displaying the determined terms for the transaction by the terms determination means; and a storage means for storing the reservation application data which represents reservation application for a transaction of a transaction target based on the transaction terms displayed by the terms display means, when the reservation application data is input.

The recording medium according to a eighth invention is characterized that, a computer-readable recording medium storing programs to make a computer accept reservation

application for a transaction of a transaction target, said programs comprises: a program code means for causing a computer, to determine terms for a transaction of a transaction target; a program code means for causing a computer to display the determined terms; and a program code means for causing a computer to store reservation application data which represents reservation application for a transaction based on the displayed transaction terms, when the reservation application data is input.

In the first invention, information on transaction favors for a transaction target defined for each time zone, which is divided at least with regards to coming time of customers to the shop, are electronically presented to a plurality of customers. And, information on transaction reservation showing transaction reservation at the time zone selected by the customer are accepted electronically. Then, a transaction with favors for the reserved transaction target is performed, when coming time of the customer to the shop, or the finish time of the transaction is included in the time zone in association with the above information on transaction reservation.

As mentioned above, a lot of customers may be able to promptly have information, by electronic presentation of the information of transaction favors, that special services such as special prices at a sale time zone and bargain

products are offered.

Customers may perform transaction reservation without a geographic restriction by electronic accepting of information on transaction reservation, and receive the favors shown in information on transaction favors, by performing deals based on the above booking.

Here, the finish time of the transaction means the purchase time in the case of purchasing products at the shop, or time to receive services in the case of receiving offered service.

In the second, sixth, and seventh inventions, terms for reserved transaction target are defined and displayed. Then, reservation to perform transaction of a transaction target is accepted, based on the above displayed terms.

Thus, a lot of customers may promptly have information, by disclosure of defined terms for transactions, that special services are offered.

It may be possible to predict, by accepting reservation to perform transaction based on the above terms for transaction, to what degree of transactions based on the terms are actually performed. Thereby, they in a shop may obtain information to what degree of products should be prepared.

In the third invention, terms for transaction are defined based on reservation states for transaction.

Appropriate terms for transactions may be defined, corresponding to conditions momentarily changing as time has elapsed.

In the fourth invention, it is confirmed whether reservation for the transaction has been actually performed, in performing transaction reserved based on the terms.

Thereby, as for special services such as special prices at a sale time zone and bargain products, only customers who have reserved to receive the above services may receive the above services, and other customers may not enjoy the above services. Therefore, customers may be promoted to reserve to receive such special services, in order to receive them.

In the fifth invention, after confirming that transaction reservation has been performed based on specific terms for transaction, favors corresponding to the above terms may be offered to customers.

Thus, favors corresponding to the above terms for transaction, points, for example, having monetary values are given to the customer who has come to a shop after reservation, instead of performing transactions based on specific terms for transactions. Thereby, as there is no apparent sign that special services based on specific terms for transaction are offered, customers who have come to the shop without reservation have no feeling that they are suffered from any feeling of loss.

The above and further objects and features of the invention will be more fully be apparent from the following detailed description with accompanying drawings.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

FIG. 1 shows a block diagram of a configuration of a system for accepting transaction reservation according to embodiment 1 of the present invention;

FIG. 2 shows a block diagram of a configuration of an apparatus for accepting transaction reservation according to embodiment 1 of the present invention;

FIG. 3 shows a conceptual diagram of a format example of a file stored in a bargain data base (DB);

FIGS. 4A through 4D show conceptual diagrams of format examples of a table stored in a basic data DB;

FIG. 5 shows a conceptual diagram of a format example of a file stored in a reservation data DB;

FIG. 6 shows a flow chart of an operation flow of a system for accepting transaction reservation according to embodiment 1 of the present invention at registration processing of bargain data, or basic data;

FIG. 7 shows a flow chart of an operation flow of an apparatus for accepting transaction reservation according to embodiment 1 of the present invention at display of bargain data;

FIG. 8 shows a flow chart of an operation flow of a system for accepting transaction reservation according to embodiment 1 of the present invention at accepting reservation;

FIG. 9 shows a flow chart of an operation flow of a system for accepting transaction reservation according to embodiment 1 of the present invention at confirmation of reservation;

FIG. 10 shows a block diagram of a configuration of an apparatus for accepting transaction reservation according to embodiment 2 of the present invention;

FIG. 11 shows a conceptual diagram of a format example of a file stored in a favored point DB; and

FIG. 12 shows a flow chart of an operation flow of a system for accepting transaction reservation according to embodiment 2 of the present invention at confirmation of booking.

DETAILED DESCRIPTION OF THE INVENTION

(Embodiment 1)

FIG. 1 shows a block diagram of a configuration of the system for accepting transaction reservation according to embodiment 1 of the present invention. In FIG. numerals 1, 1, 1 ··· show terminal devices, which are provided in customer's home 10 and office 11, and a shop 12. In the

customer's home 10 and office 11, confirmation of the contents of services which are offered at each shop, and reservation are performed by the customer through the terminal devices 1, 1 ···. When the terminal devices 1, 1 ··· are portable devices such as portable telephones, it may be possible for the customer to perform the confirmation of the contents of services, and the reservation of them at any required time and at any necessary place.

In the shop 12, registration of service contents and basic data for definition of the service contents, confirmation of reservation contents, and so on are performed by employees of the shop 12 through the terminal devices 1, 1 ···.

An apparatus for accepting transaction reservation 2 for performing communications with the terminal devices 1, 1 ··· is connected to a network 3, and provided in, for example, a machine center 13 managed by a plurality of shops. The accepting apparatus 2 is not limited to the above provision and may be also installed in the shop, or may be consigned to a service provider, and so on.

FIG. 2 shows a block diagram of a configuration of the apparatus for transaction reservation 2 according to embodiment 1 of the present invention. In FIG. 2, the accepting apparatus 2 for transaction reservation has a CPU 21, to which a RAM 22 to store data generated in the above

CPU 21, an external memory 23 comprising a CD-ROM drive or a flexible disk drive, and so on to read programs of the apparatus for accepting transaction reservation 2 according to embodiment 1 of the present invention from a portable recording medium 100 such as a CD-ROM, or a flexible disk storing the above programs, a hard disk 24 to store programs of the present invention read through the above external memory 23, and a communication interface 25 for connection with the above network 3 are connected.

The above hard disk 24 comprises three data bases (a bargain data DB 240, a basic data DB 241, and a reservation data DB 242) described later.

The programs of the apparatus for accepting transaction reservation 2 according to embodiment 1 of the present invention may be read from the above portable recording medium 100, and, moreover, may be downloaded, by connection to an external server computer 4 through the network 3, from a recording medium 5, which is installed in the above external server computer 4 and stores the above programs, to the above apparatus for accepting transaction reservation 2. The above accepting device 2 may execute the processing described below by storing the downloaded programs in the above hard disk 24, and by loading the stored programs to the RAM 22 by the CPU 21.

Then, the above three data bases will be described

below. A first data base, that is, the bargain data DB 240 stores bargain data (i.e. service data) on special services at a specified time zone such as a sale time zone. The above bargain data is received from the terminal devices 1, 1 ··· according to the procedure described below.

FIG. 3 shows a conceptual diagram of a format example of a file stored in the bargain data DB 240. As shown in FIG. 3, five fields, that is, a shop ID field 40a, a date field 40b, a time field 40c, and a field for bargain target 40d, and a discount rate field 40e are provided in the bargain data DB 240.

A shop identifier (hereinafter, called as a shop ID) to identify the shop, a date when services offered by the shop are performed, and time when the services are performed are stored in the shop ID field 40a, the date field 40b, and time field 40c, respectively.

And, product names of target products for special services, and discount rates applied to the above products are stored in the field of bargain target 40d, and the discount rate field 40e, respectively. Moreover, the above discount rate is calculated according to the procedure described below.

The format example shown in FIG. 3 denotes that, for example, in a shop with a shop ID "A", all the products dealt in the shop are uniformly discounted at 10% in their

prices between 9 a.m. and 11 a.m. on November 10, 1999.

A second data base, that is, the basic data DB 241 stores a various kinds of data (hereinafter, called as basic data), which are used for calculation of the above discount rate, in a form of a table. The above basic data are received from the terminal devices 1, 1 ···, according to the procedure described below.

FIG. 4 shows a conceptual diagram of a format example of a table stored in the basic data DB 241. FIG. 4A shows a table with a target number of persons coming to a shop and a prospective number of the persons, in which the target number of persons coming to the shop and the prospective number of the persons at each time zone are defined and stored. FIGS. 4B and 4C show a day-of-week coefficient table and a weather coefficient table, respectively. The above coefficients are defined for each day-of-week and each weather, according to the prospective number of persons coming to the shop, and stored in the above tables, respectively. Moreover, FIG. 4D shows a discount rate table which stores discount rates corresponding to reservation rates calculated according to the procedure described below.

The table stored in the basic data DB 241 is not limited to the above table, and for example, a table including coefficients defined according to prospective number of persons coming to the shop for each month or each

temperature may be stored. Moreover, the above tables are prepared and stored in each shop.

A third database, that is, the reservation data DB 242 stores reservation data on the reservation accepted from each customer. And the above reservation data is received from the terminal devices 1, 1 ··· according to the procedure described later.

FIG. 5 shows a conceptual diagram of a format example of a file stored in a reservation data DB 242. As shown in FIG. 5, five fields, that is, a customer ID field 42a, a shop ID field 42b, a date and time field 42c, and a reservation data field 42d, and a reservation ID field 42e are provided in the reservation data DB 242.

A customer identifier (hereinafter, called as a customer ID) to identify each customer and a shop ID for each shop are stored in the customer ID field 42a and the shop ID field 42b, respectively. Moreover, a date and time when the reservation has been accepted, data showing the contents of the reservation, and a reservation identifier (hereinafter, called as a reservation ID) to identify the reservation are stored in the date and time field 42c, the reservation data field 42d, and the reservation ID field 42e, respectively.

The format example shown in FIG. 5 denotes that, for example, at 10 a.m. on November 10, 1999, a customer with a

customer ID of 123456″ has reserved a discount service that all the products in a shop with a shop ID of ″A″ will be sold at a discount rate of 10%, and the reservation ID is ″1″.

For example, in a shop having a membership system, an identifier for each member is used for a customer ID stored in the customer ID field 42a, and in a shop without such membership system, a name of each customer, and so on are used.

Then, the operation of the system for accepting transaction reservation of the embodiment of the present invention will be described.

FIG. 6 shows a flow chart of an operation flow of a system for accepting transaction reservation according to the embodiment 1 of the present invention at registration processing of bargain data, or basic data.

The terminal devices 1, 1 … display a screen for promotion to input the bargain data (or, basic data) on the devices themselves. Employees of each shop, and so on input the bargain data (or, basic data) with respect to the screen.

When the bargain data (or, basic data) is received (S101), the terminal devices 1, 1 … transmit received bargain data (or, basic data) to the apparatus for accepting transaction reservation 2 (S102).

The apparatus for accepting transaction reservation 2 registers the received bargain data (or, basic data) in the bargain data DB 240 (or, basic data DB 241) (S202), when the bargain data (or, basic data) is received from the terminal devices 1, 1 ··· (S201), and transmits registration-completion data, denoting that the registration to the bargain data DB 240 (or, basic data DB 241) has been completed, to the terminal devices 1, 1 ··· (S203).

The devices 1, 1 ··· displays the received registration-completion data on the display screen of the terminal devices 1, 1 ··· (S104), when the registration-completion data is received from the apparatus for accepting transaction reservation 2 (S103).

Thereby, the employees of the shop and so on may register the desired bargain data (or, basic data) to the apparatus for accepting transaction reservation 2. The above registration processing is performed, whenever it is judged that the previously registered bargain data (or, basic data) is required to be changed.

FIG. 7 shows a flow chart of an operation flow of the apparatus for accepting transaction reservation 2 according to embodiment 1 of the present invention at display of the bargain data.

The apparatus for accepting transaction reservation 2 calculates prospective number of unreserved coming to a

shop, that is, prospective number of customers coming to a shop without reservation (S301). The above calculation is performed with the product of the target number of persons coming to a shop shown in FIG. 4A, the prospective number of persons coming to a shop stored in the table with the prospective number of persons coming to the shop, the coefficients stored in the day-of-week coefficient table shown in FIG. 4B, and coefficients stored in the weather coefficient table shown in FIG. 4C. According to the calculation example, for example, the prospective number of persons coming to a shop without reservation at 10 a.m. on a rainy Saturday is calculated by the product of 50 (persons) for a prospective number of persons coming to a shop at 10 a.m., 80(%) for a weather coefficient on a rainy day, and 120(%) for a day-of-week coefficient on a Saturday to obtain 48 (persons).

Then, a reservation rate of the reservation which each customer has performed is calculated (S302) as described below, based on the prospective number of persons coming to the shop without reservation, which has been calculated at the step S301. The above calculation is performed by division of, for example, the reservation number showing cumulative number of reservation by a value obtained through subtraction of the above prospective number of persons coming to the shop without reservation from the target

number of persons coming to the shop stored in the table, shown in FIG. 4A. According to the above calculation example, for example, when the reservation number at 10 a.m. on a rainy Saturday is 76, the reservation rate is calculated by division of 76 by subtraction of 48 from 200 to obtain 0.5, that is, 50(%).

Then, a discount rate for an offering service is calculated, based on the reservation rate calculated at the step S302 (S303). The above calculation is performed, using the discount rate table shown in FIG. 4D. That is, when the reservation rate is 50(%) as in the above example, the discount rate becomes 20(%).

The discount rate calculated as above is stored in a discount rate field 40e of the bargain data DB 240 to update the contents of the bargain data DB 240 (S304). The updated contents of the bargain data DB 240 is displayed (S305). Here, the display means the disclosure on the network 3. Each customer may confirm the contents of the bargain data DB 240, using the terminal devices 1, 1….

Moreover, the discount rate may be calculated by the apparatus for accepting transaction reservation 2 as shown above, but the rate may be also defined by the employees of each shop. In such a case, the employees transmit the discount rate to the apparatus for accepting transaction reservation 2, using the terminal devices 1, 1 …. Then,

the apparatus for accepting transaction reservation 2 stores the received discount rate to the discount rate field 40e of the bargain data DB 240 and displays it.

The above processing may be also executed when display of the bargain data is required from the terminal devices 1, 1 ··· of customers. Moreover, after the steps S301 through S304 are executed at a regular interval, the step S305 may be configured to be executed when display of the bargain data is required from the terminal devices 1, 1 ··· of customers.

FIG. 8 shows a flow chart of an operation flow of the system for accepting transaction reservation according to embodiment 1 of the present invention at accepting reservation.

The terminal devices 1, 1 ··· display a screen for promotion to input the reservation application date showing the application of the reservation on the devices themselves. Each customer inputs the reservation application data with the devices.

When the reservation application data is received (S401), the terminal devices 1, 1 ··· send the received reservation application data to the apparatus for accepting transaction reservation 2 (S402).

The apparatus for accepting transaction reservation 2 registers the received reservation application data in the

reservation data DB 242 (S502), when the reservation application data is received from the terminal devices 1, 1 ··· (S501), and transmits registration-completion data, denoting that the registration to the reservation data DB 242 has been completed, to the terminal devices 1, 1 ··· (S503). The registration-completion data includes a reservation ID numbered at registration to the reservation data DB 242.

The devices 1, 1 ··· display the received registration-completion information on the display screen of the devices themselves (S404), when the registration-completion data is received from the apparatus for accepting transaction reservation 2 (S403).

The above reservation ID may be numerals, bar codes, and the like. In the case of numerals for the reservation ID, the customer tells the reservation ID to a cashier by verbal communication at payment, after writing down the ID on a sheet of paper to bring it to the shop. In another embodiment, the numerals or the bar codes and so on for the reservation ID may be printed with a printer, and the customer may bring the printed one to the shop. In the above case, the reservation ID may be confirmed on the terminal devices 1, 1 ··· of the shop, using an optical character reader (OCR) or a bar code reader. Moreover, the terminal devices 1, 1 ··· may not be special devices for

transaction reservation, but maybe a POS (point of sales) terminal.

In addition, the reservation ID may be stored in a memory device of a portable telephone, and brought to a shop to confirm the reservation ID by communication between the terminal devices 1, 1 ··· of the shop and the portable telephone.

Further, in a shop having a membership system, the presence of the reservation may be confirmed, using a number of member in stead of the reservation ID. In the above case, the confirmation of the reservation ID may be confirmed by collation between the customer ID stored in the customer ID field 42a of the reservation data DB 242 and the member number written on a member card, when the member card is read at payment.

Thereby, each customer may perform application of desired reservation, and, as there is a case to change the above reservation rate and the discount rate according to the reservation application, the apparatus for accepting transaction reservation 2 updates the bargain data DB 240 according to the above procedure, in the above case, and then discloses new bargain data on the network 3.

Each customer goes out to each shop at reserved time to tell the reservation ID at the shop. Then, the reservation may be confirmed according to a procedure described below.

FIG. 9 shows a flow chart of an operation flow of the system for accepting transaction reservation according to embodiment 1 of the present invention at confirmation of reservation.

In each shop, the employees and so on input reservation confirmation data including the above reservation ID to the terminal devices 1, 1 ··· in order to confirm the reservation, when the reservation ID is told. The terminal devices 1, 1 ··· transmit the accepted reservation confirmation data to the apparatus for accepting transaction reservation 2 (S602), when the reservation confirmation data is accepted (S601).

When the apparatus for accepting transaction reservation 2 receives the reservation confirmation data from the terminal devices 1, 1 ··· (S701), referring to the reservation data DB 242 (S702), the reservation ID included in the reservation confirmation data is retrieved as a key (S703). In the case of failure in the retrieval (NO at the step S703), the confirmation failure data showing that the reservation confirmation has not been performed is transmitted to the terminal devices 1, 1 ··· (S704).

The devices 1, 1 ··· display the received confirmation failure data on the display screen of the devices themselves (S604), when the confirmation failure data is received from the apparatus for accepting transaction reservation 2

(S603).

On the other hand, when there is success in the retrieval of the reservation data DB 242 at the step S703 (YES at the step S703), the confirmation success data showing that the reservation confirmation has been performed is transmitted to the terminal devices 1, 1 ··· (S705).

The devices 1, 1 ··· display the received confirmation success data on the display screen of the devices themselves (S606), when the confirmation success data is received from the apparatus for accepting transaction reservation 2 (S605).

Then, when the reservation has been confirmed, and the time of the above confirmation is included in the time zone shown in the reservation data, the customer may receive the services in association with the reservation.

Moreover, when the time of coming to the shop is included in the time zone shown in the reservation data, the customer may be also configured to receive the above services. In the above case, the time of coming to a shop of the customer may be configured to be identified, for example, by a method in which the customer receives a piece of paper with printed time of coming to the shop when the customer comes to the shop.

And, when the accepting service for transaction reservation realized by the system for accepting transaction

reservation according to the present invention is performed by a service provider and so on as an agent, the service provider may claim the agency service charge from the side (a shop and so on) asking the services. In the above case, the claimed charge may be set as a constant amount, or it may be calculated based on the amount for the transaction, when the transaction in association with the reservation is actually performed.

(Embodiment 2)

FIG. 10 shows a block diagram of a configuration of the apparatus for accepting transaction reservation according to embodiment 2 of the present invention.

In the apparatus for accepting transaction reservation 2 according to embodiment 2 of the present invention, a fourth data base, that is, a favored point DB 243 is added to the hard disk 24, different from the apparatus for accepting transaction reservation 2 according to embodiment 1 of the present invention The programs in the apparatus for accepting transaction reservation 2 according to embodiment 2 of the present invention are stored in a portable recording medium 300. Moreover, the programs are stored in a recording medium 5 installed in an external server computer 4, and they may be downloaded. As the configurations, other than the above, are similar to those previously described with reference to embodiment 1, they

are denoted by the same reference numerals, and the description will be eliminated.

FIG. 11 shows a conceptual diagram of a format example of a file stored in the above fourth data base, that is, a favored point DB 243.

As shown in FIG. 11, the favored point DB 243 has three fields, that is, a customer ID field 43a, a shop ID field 43b, and a point field 43c.

The customer ID field 43a, the shop ID field 43b, and the point field 43c, respectively, store a customer ID to identify each customer, a shop ID of each shop, and points corresponding to monetary values, with which, for example, a product with a value of ¥1 may be purchased by one point.

For example, the format example shown in FIG. 11 denotes that 500 points, which may be used in a shop with a shop ID of "A", are given to a customer with a customer ID of "123456".

Now, operation of the system for accepting transaction reservation according to embodiment 2 of the present invention will be described. But, the registration of the bargain data and basic data, the display of the bargain data, and the operation at each processing for accepting the reservation are similar to those of embodiment 1 to eliminate the description.

FIG. 12 shows a flow chart of an operation flow of the

system for accepting transaction reservation according to embodiment 2 of the present invention at confirmation of reservation. Processing similar to that in embodiment 1 is denoted by the same reference numerals, and its description will be eliminated.

In the case of the success in the retrieval of the reservation data DB 242 at the step S703 (YES at the step 703), points corresponding to the discount rate for the confirmed reservation is calculated (S801). The above calculation is performed by, for example, making points correspond to the charges equivalent to the discounted amount. According to the above calculation, the points become 500, when the discount rate for a products with a price of ¥5,000 is 10%.

The favored point DB 243 is updated by storing the point calculated as shown above in the point field 43c of the favored point DB 243 (S802). And, based on the updated contents, data on the newly added points and the cumulative points is transmitted to the terminal devices 1, 1 ··· (S803).

The devices 1, 1 ··· display the received point data on the display screen of the devices themselves (S902), when the point data is received from the apparatus for accepting transaction reservation 2 (S901).

In the present embodiment, the point calculation is

performed when the reserved transaction is performed, but the above calculation may be performed at a predetermined time interval, or every predetermined cumulative number of transactions.

As mentioned above, when the reservation is confirmed, customers may obtain points corresponding to the contents of reserved services. Thereby, as there is no apparent sign that special services shown in the bargain data are offered, customers who have come to the shop without reservation have no feeling that they are suffered from any feeling of loss.

And, in the case of no execution of the reserved transaction, reduction in the cumulative points by an appropriate points may be performed. In the above case. a fixed point previously determined may be reduced, or the reduced points may be calculated according to reserved products and services.

As this invention may be embodied in several forms without departing from the spirit of essential characteristics thereof, the present embodiment is therefore, illustrative and not restrictive, since the scope of the invention is defined by the appended claims rather than by the description preceding them, and all changes that fall within metes and bounds of the claims, or equivalence of such metes and bounds thereof are therefore intended to be embraced by the claims.

CLAIMS

1. A method for accepting transaction reservation, comprising the steps of:

electronically presenting information on transaction favors of a transaction target defined for each time zone to a plurality of customers;

electronically accepting information on transaction reservation at a selected time zone by a customer; and

performing a transaction with favors for the reserved transaction target, when the visiting time of a customer to a shop, or the finish time of the transaction is included in the time zone in association with said accepted information on transaction reservation.

2. A method for accepting transaction reservation of a transaction target, comprising the steps of:

determining terms for a transaction of a transaction; displaying the determined terms for the transaction ; and

accepting reservation of transaction of the transaction target based on the displayed terms.

3. A method according to claim 2, wherein the step of determining the terms for a transaction is a step of determining terms for a transaction based on the state of the transaction reservation.

4. A method according to claim 2, wherein the accepting step further comprises a step of confirming whether the

reservation has been accepted.

5. A reception method for deal booking according to claim 4, characterized in that it further comprises the following steps:

A method according to claim 4, further comprising the steps of:

determining favors for the reserved transaction which has been confirmed to be accepted by the confirmation step, based on its terms; and

offering the determined favors.

6. A method according to claim 3, wherein the accepting step further comprises a step of confirming whether the reservation has been accepted.

7. A method according to claim 6, further comprising the steps of:

determining favors for the reserved transaction which has been confirmed to be accepted by the confirmation step, based on its terms; and

offering the determined favors.

8. A system for accepting transaction reservation provided with a plurality of terminal devices, and an apparatus for accepting transaction reservation, connected to the terminal devices respectively, to accept reservation for a transaction of a transaction target, characterized in that

said accepting apparatus comprises:

(i) a terms determination means for determining terms for a transaction of a transaction target; and

(ii) a transaction terms display means for displaying the terms for the transaction determined by the terms determinations means;

said terminal devices comprises:

(i) an accepting means for accepting reservation application data which represents reservation application for a transaction of a transaction target based on the displayed terms; and

(ii) a transmission means for transmitting the reservation application data accepted by the accepting means to the accepting apparatus; and

said accepting apparatus further comprises a storage means for storing received reservation application data, when the reservation application data is received.

9. An apparatus for accepting transaction reservation to accept reservation application for a transaction of a transaction target, comprising:

a terms determination means for determining terms for a transaction of a transaction target;

a transaction terms display means for displaying the determined terms for the transaction by the terms determination means; and

a storage means for storing the reservation application data which represents reservation application for a transaction of a transaction target based on the transaction terms displayed by the terms display means, when the reservation application data is input.

10. A computer-readable recording medium storing programs to make a computer accept reservation application for a transaction of a transaction target, said programs comprises:

a program code means for causing a computer, to determine terms for a transaction of a transaction target;

a program code means for causing a computer to display the determined terms; and

a program code means for causing a computer to store reservation application data which represents reservation application for a transaction based on the displayed transaction terms, when the reservation application data is input.

11. A system for accepting transaction reservation provided with a plurality of terminal devices, and an apparatus for accepting transaction reservation, connected to the terminal devices respectively, to accept reservation for transaction of a transaction target, characterized in that

said accepting apparatus comprises a storage medium and

a controller coupled to the storage medium, and capable of performing the following operations:

(i) determining terms for a transaction of a transaction target; and

(ii) displaying the determined terms for the transaction;

said terminal device comprises a storage medium and a controller coupled to the storage medium, and capable of performing the following operations:

(i) accepting reservation application data which represents reservation application for a transaction of a transaction target based on the displayed terms; and

(ii) transmitting the accepted reservation application data to the accepting apparatus; and the controller of said accepting apparatus is further capable of storing the received reservation application data in the storage medium, when the reservation application data is received.

12. An apparatus for accepting transaction reservation to accept reservation application for a transaction of a transaction target, comprising:

a storage medium; and

a controller coupled to the storage medium, and capable of performing the following operations:

determining terms for a transaction of a transaction target;

displaying the terms for the determined transaction; and

storing the reservation application data which represents reservation application for a transaction of a transaction target based on the displayed transaction terms in the storage medium, when the reservation application data is input.

ABSTRACT OF THE DISCLOSURE

There are offered an accepting method for transaction reservation, system and apparatus to execute the method and a recording medium in which terms, such as a discount rate in transaction, for a transaction target such as products are disclosed on a network, and a lot of customers may promptly have information that discount bargains are available, and, moreover, the number of customers who desire to receive the offered discount bargains may be previously obtained by accepting reservation to perform the above transaction based on the above terms.

FIG. 1

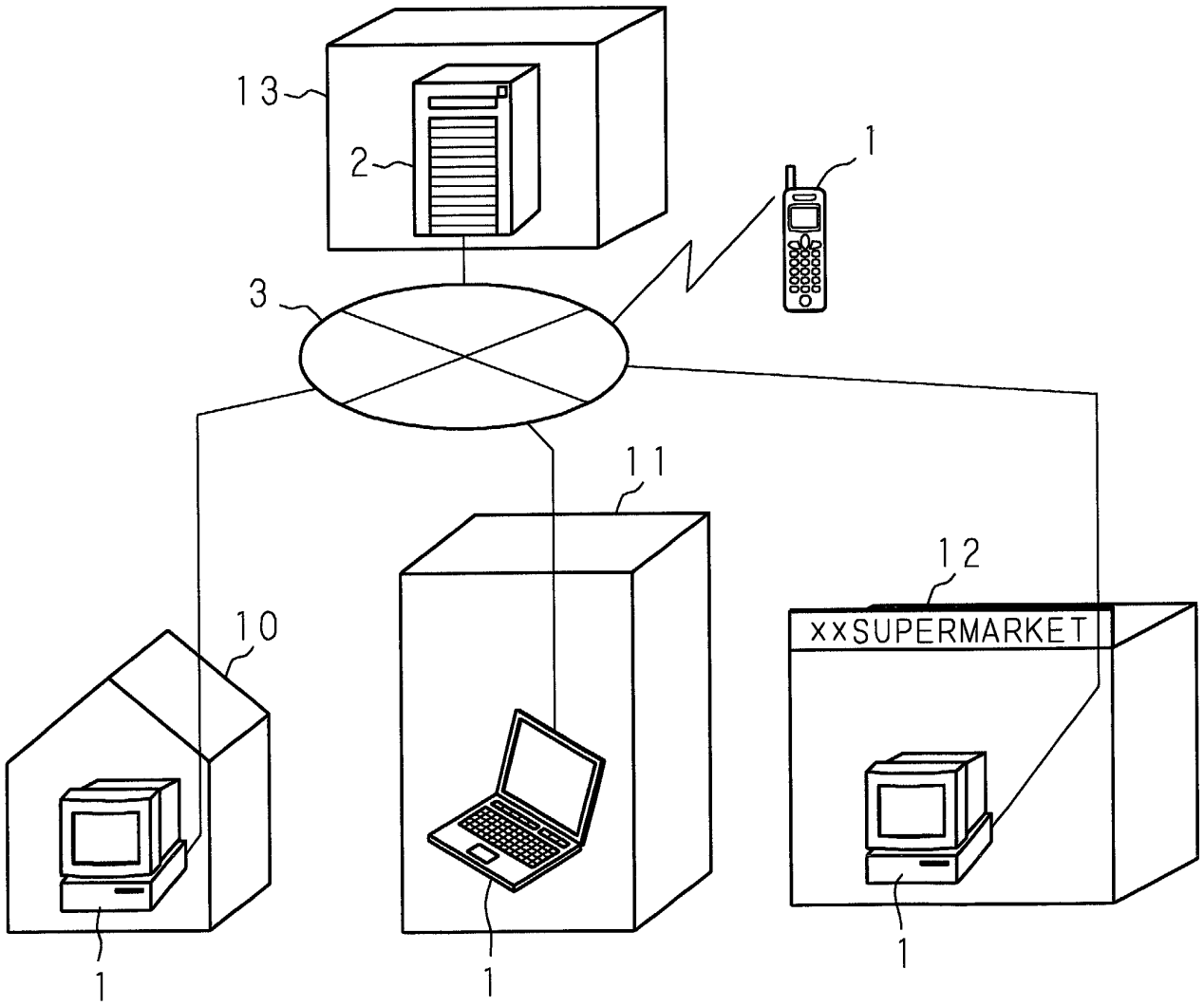


FIG. 2

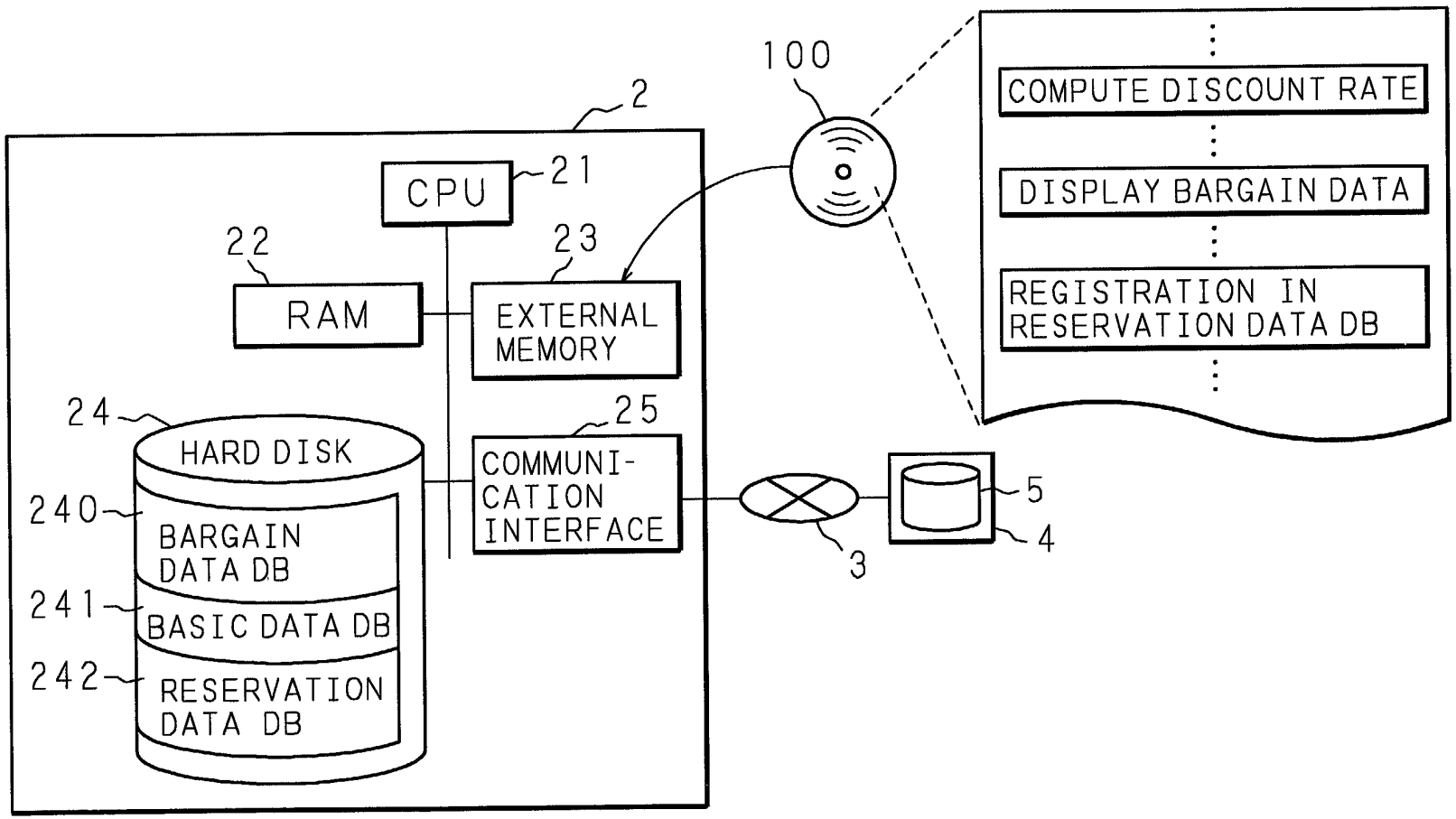

100
2
CPU
21
22
RAM
23
EXTERNAL MEMORY
24
HARD DISK
240
BARGAIN DATA DB
241
BASIC DATA DB
242
RESERVATION DATA DB
25
COMMUNI-CATION INTERFACE
3
5
4
COMPUTE DISCOUNT RATE
DISPLAY BARGAIN DATA
REGISTRATION IN RESERVATION DATA DB

FIG. 3

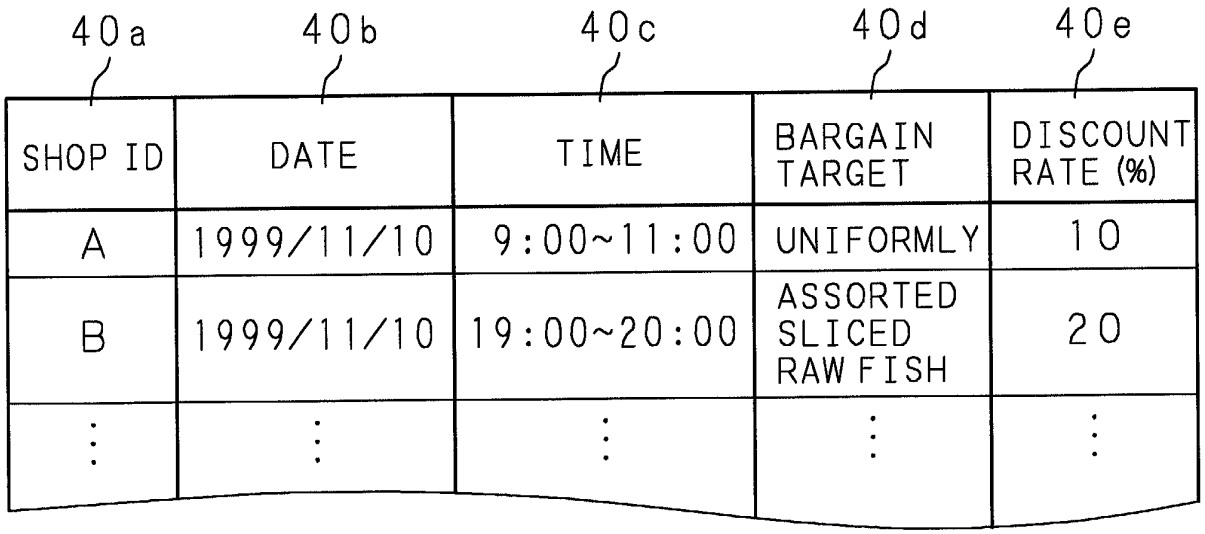

40a
40b
40c
40d
40e
SHOP ID
DATE
TIME
BARGAIN TARGET
DISCOUNT RATE (%)
A
1999/11/10
9:00~11:00
UNIFORMLY
10
B
1999/11/10
19:00~20:00
ASSORTED SLICED RAW FISH
20

FIG. 4A

TIME	10	11	12	13	14	15	16	17	18	19	20
TARGET NUMBER OF PERSONS	200	200	150	200	200	200	200	200	200	150	200
PROSPECTIVE NUMBER OF PERSONS	50	70	50	70	80	100	150	150	100	60	50

FIG. 4B

DAY OF WEEK	MON	TUE	WED	THU	FRI	SAT	SUN
COEFFICIENT (%)	60	70	70	70	80	120	150

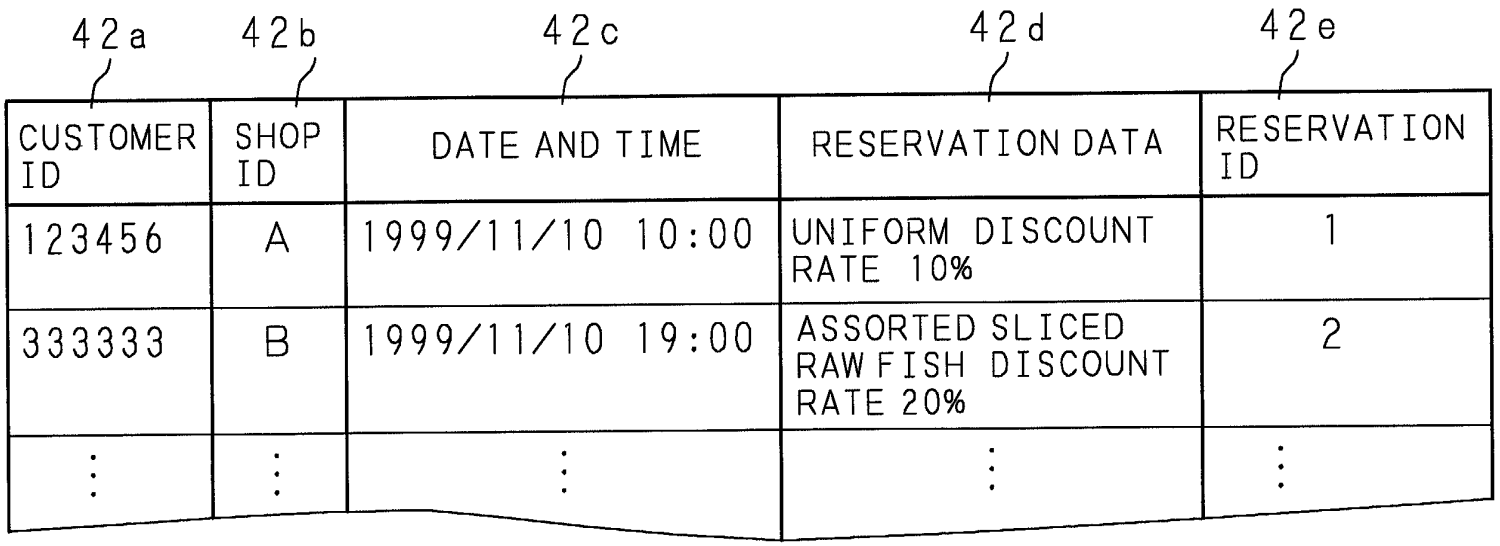
FIG. 4C

WEATHER	SUNNY	CLOUDY	RAINY
COEFFICIENT (%)	100	100	80

FIG. 4D

RESERVATION RATE (%)	0	10	20	30	40	50	60	70	80	90	100
DISCOUNT RATE (%)	40	30	30	30	20	20	20	20	10	10	10

FIG. 5



CUSTOMER ID	SHOP ID	DATE AND TIME	RESERVATION DATA	RESERVATION ID
123456	A	1999/11/10 10:00	UNIFORM DISCOUNT RATE 10%	1
333333	B	1999/11/10 19:00	ASSORTED SLICED RAW FISH DISCOUNT RATE 20%	2
⋮	⋮	⋮	⋮	⋮

FIG. 6

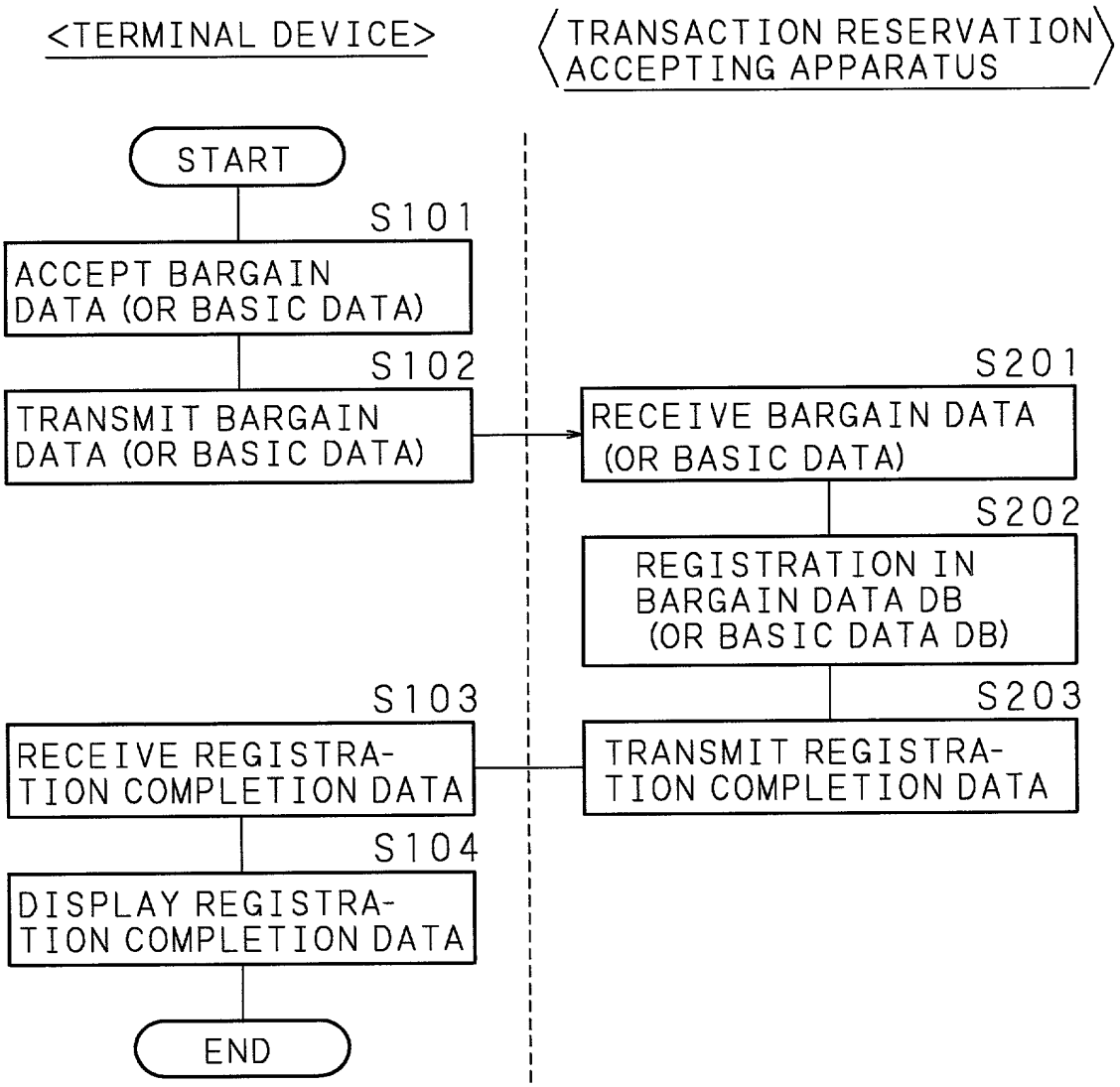

<TERMINAL DEVICE>
<TRANSACTION RESERVATION ACCEPTING APPARATUS>
START
S101
ACCEPT BARGAIN DATA (OR BASIC DATA)
S102
TRANSMIT BARGAIN DATA (OR BASIC DATA)
S201
RECEIVE BARGAIN DATA (OR BASIC DATA)
S202
REGISTRATION IN BARGAIN DATA DB (OR BASIC DATA DB)
S203
TRANSMIT REGISTRATION COMPLETION DATA
S103
RECEIVE REGISTRATION COMPLETION DATA
S104
DISPLAY REGISTRATION COMPLETION DATA
END

FIG. 7

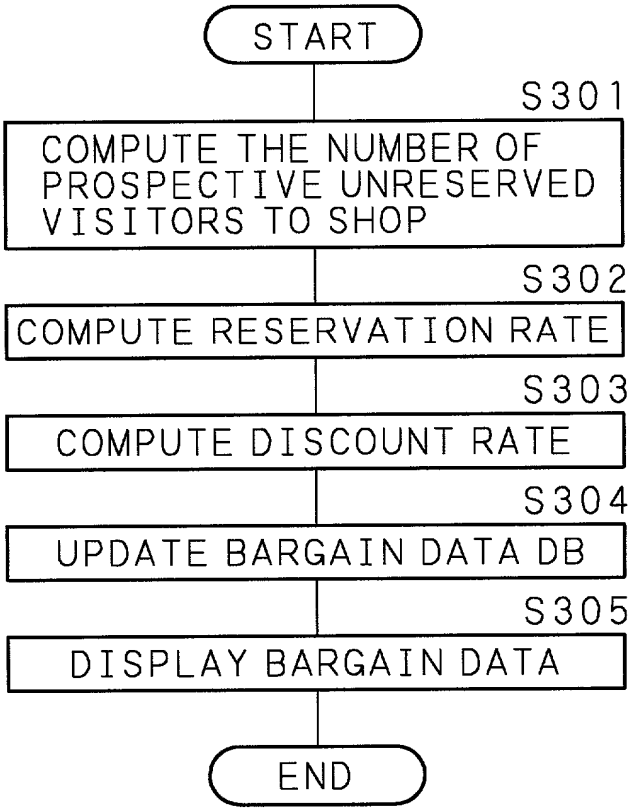

START
S301
COMPUTE THE NUMBER OF PROSPECTIVE UNRESERVED VISITORS TO SHOP
S302
COMPUTE RESERVATION RATE
S303
COMPUTE DISCOUNT RATE
S304
UPDATE BARGAIN DATA DB
S305
DISPLAY BARGAIN DATA
END

FIG. 8

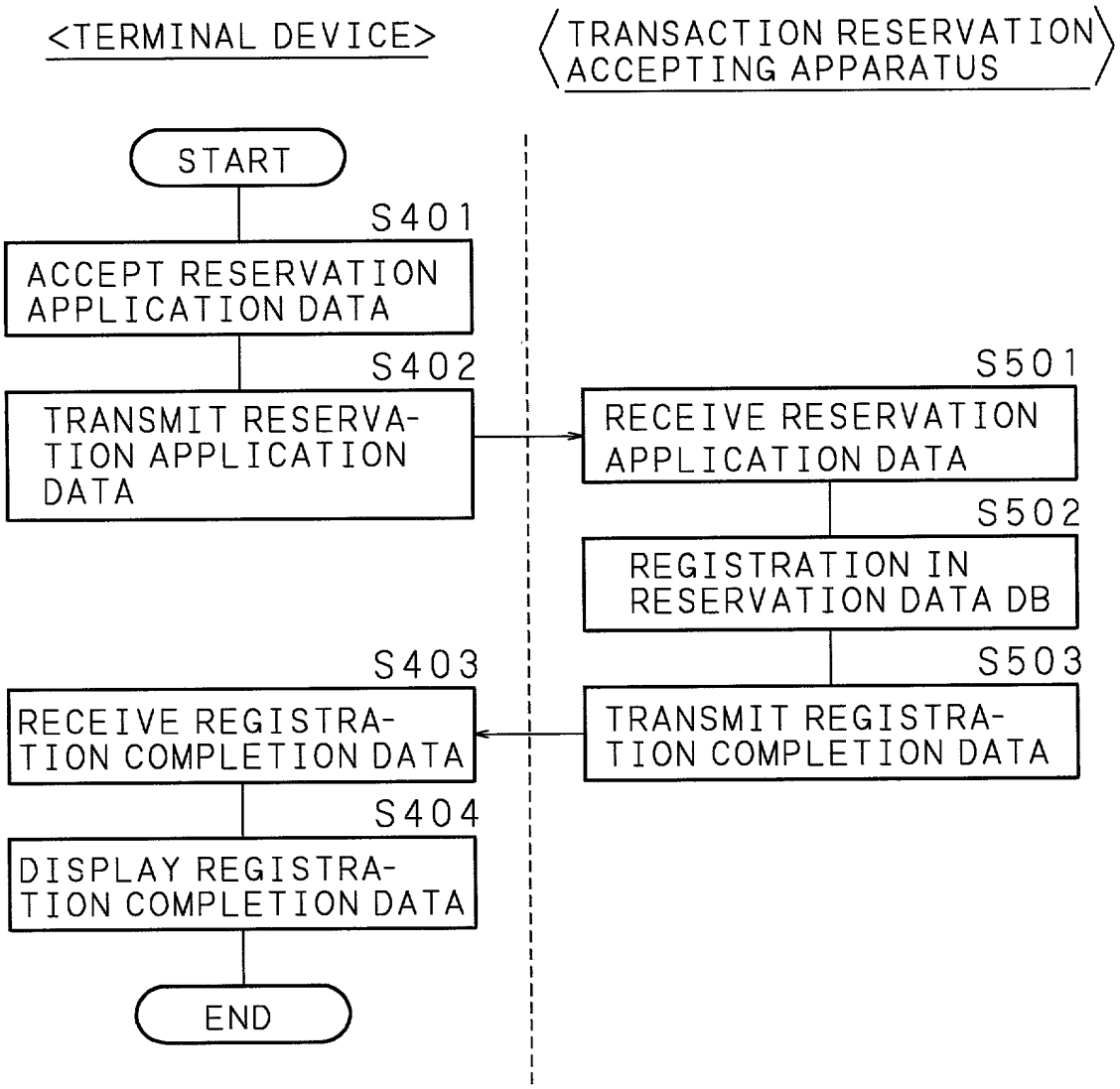

<TERMINAL DEVICE>
<TRANSACTION RESERVATION ACCEPTING APPARATUS>
START
S401
ACCEPT RESERVATION APPLICATION DATA
S402
TRANSMIT RESERVATION APPLICATION DATA
S501
RECEIVE RESERVATION APPLICATION DATA
S502
REGISTRATION IN RESERVATION DATA DB
S503
TRANSMIT REGISTRATION COMPLETION DATA
S403
RECEIVE REGISTRATION COMPLETION DATA
S404
DISPLAY REGISTRATION COMPLETION DATA
END

FIG. 9

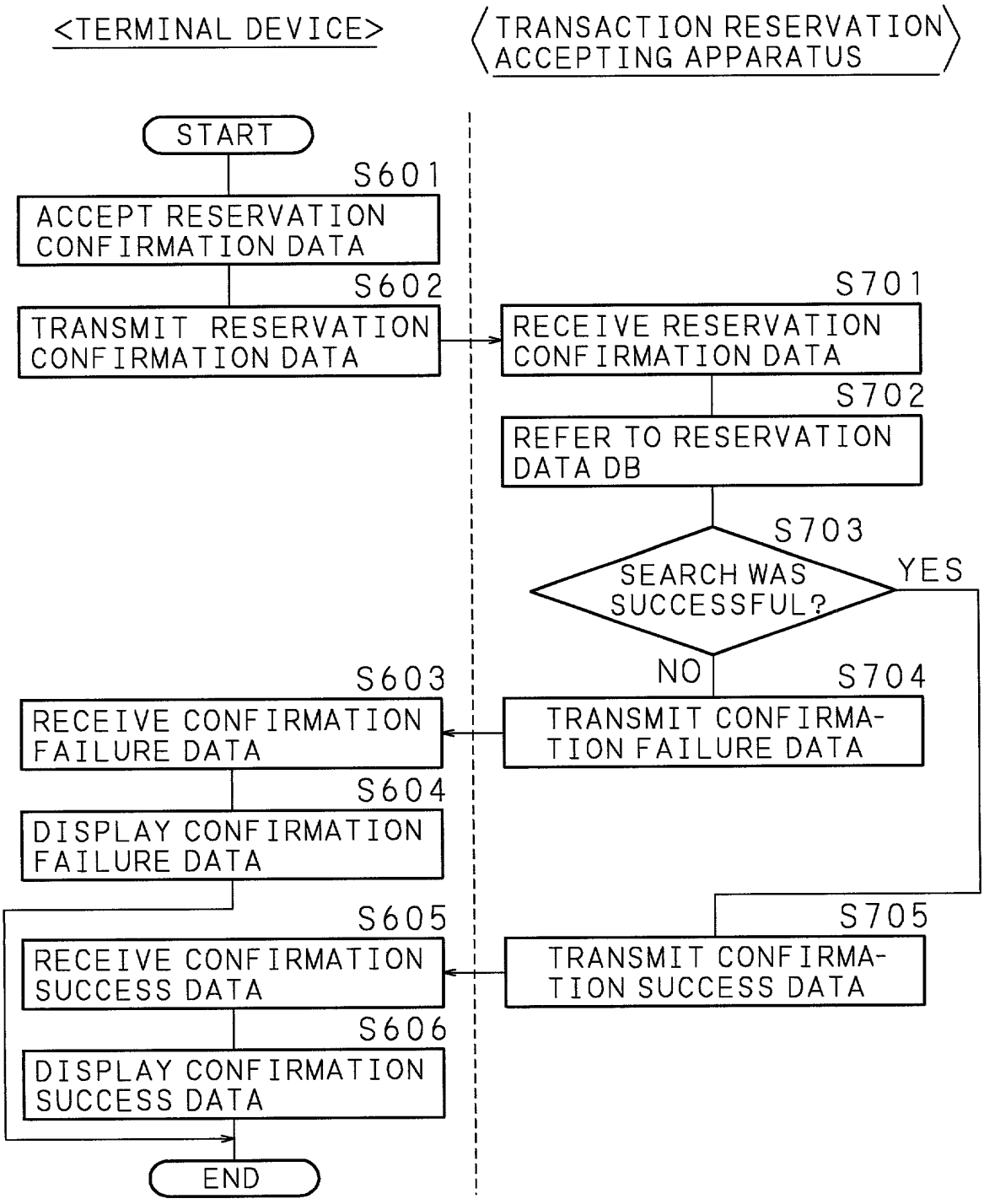

<TERMINAL DEVICE>
<TRANSACTION RESERVATION ACCEPTING APPARATUS>
START
S601
ACCEPT RESERVATION CONFIRMATION DATA
S602
TRANSMIT RESERVATION CONFIRMATION DATA
S701
RECEIVE RESERVATION CONFIRMATION DATA
S702
REFER TO RESERVATION DATA DB
S703
SEARCH WAS SUCCESSFUL?
YES
NO
S704
TRANSMIT CONFIRMATION FAILURE DATA
S603
RECEIVE CONFIRMATION FAILURE DATA
S604
DISPLAY CONFIRMATION FAILURE DATA
S705
TRANSMIT CONFIRMATION SUCCESS DATA
S605
RECEIVE CONFIRMATION SUCCESS DATA
S606
DISPLAY CONFIRMATION SUCCESS DATA
END

FIG. 10

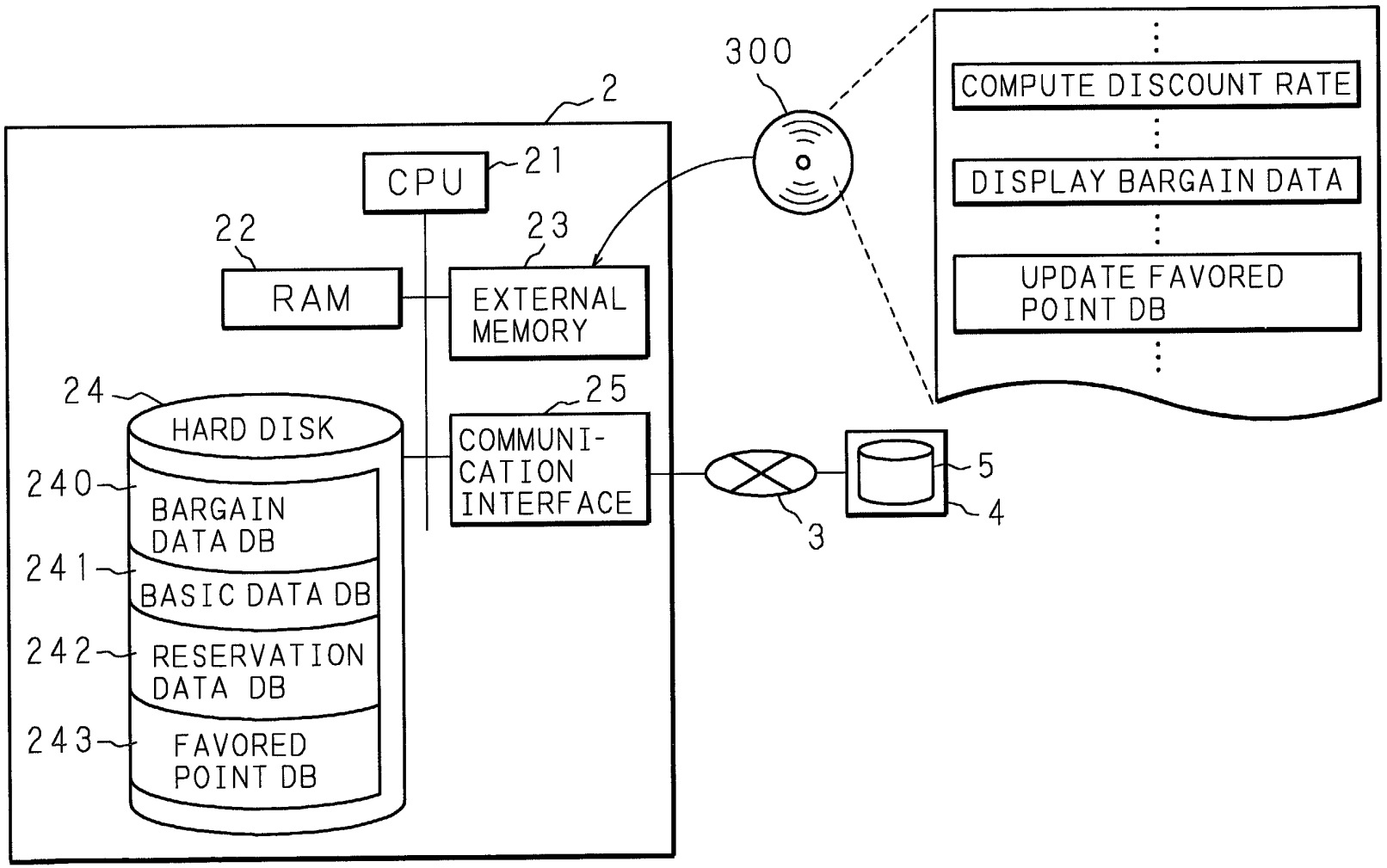

300
2
CPU
21
22
23
RAM
EXTERNAL MEMORY
24
25
HARD DISK
COMMUNI-CATION INTERFACE
240
BARGAIN DATA DB
241
BASIC DATA DB
242
RESERVATION DATA DB
243
FAVORED POINT DB
3
4
5
COMPUTE DISCOUNT RATE
DISPLAY BARGAIN DATA
UPDATE FAVORED POINT DB

FIG. 11

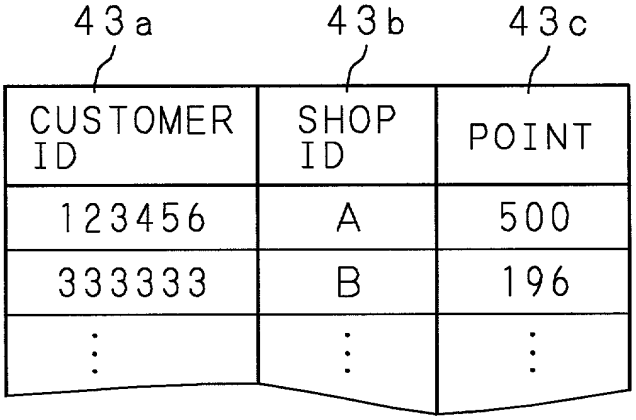
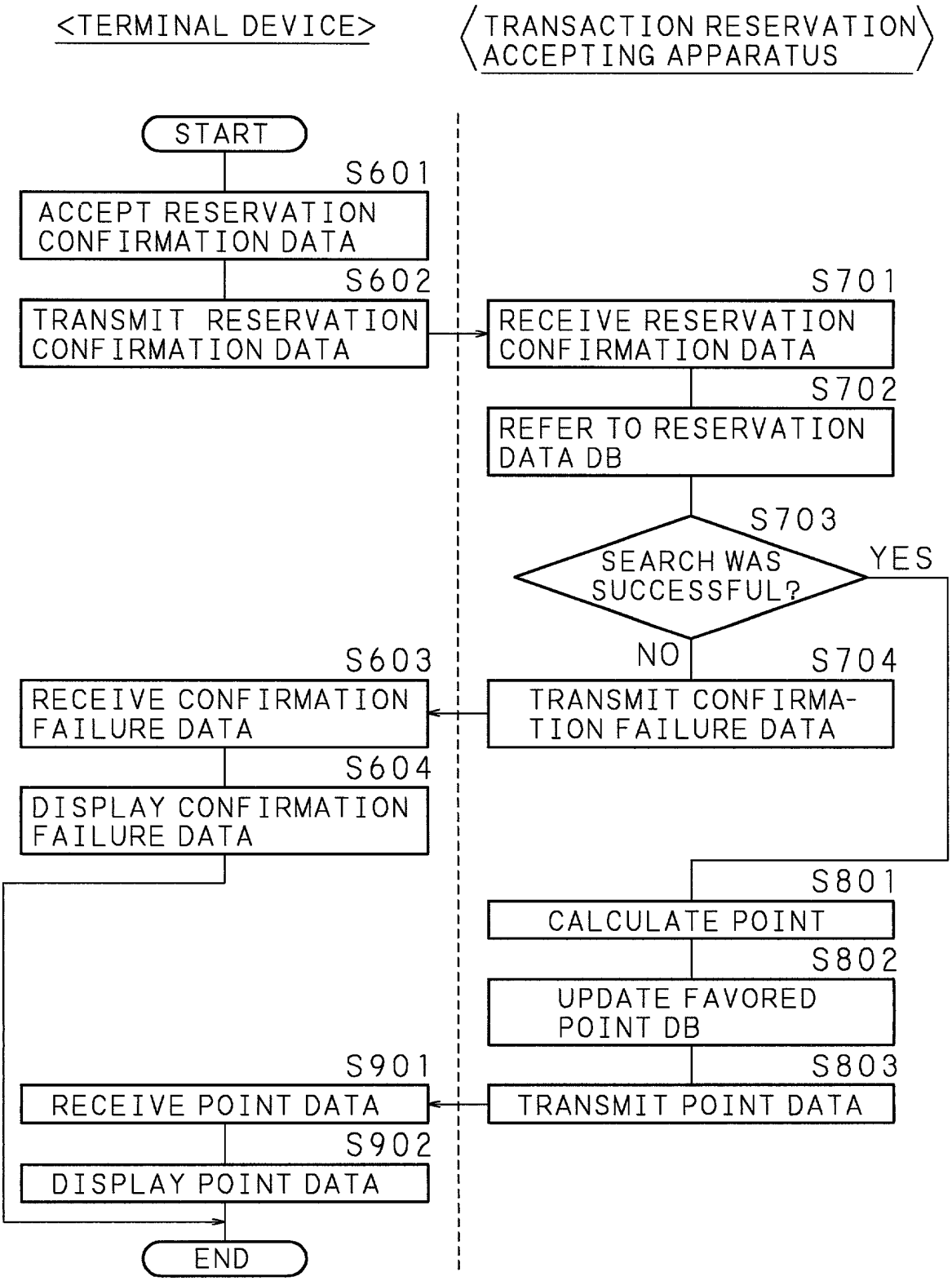

43a
43b
43c
CUSTOMER ID
SHOP ID
POINT
123456
A
500
333333
B
196

FIG. 12


<TERMINAL DEVICE>
<TRANSACTION RESERVATION ACCEPTING APPARATUS>
START
S601
ACCEPT RESERVATION CONFIRMATION DATA
S602
TRANSMIT RESERVATION CONFIRMATION DATA
S701
RECEIVE RESERVATION CONFIRMATION DATA
S702
REFER TO RESERVATION DATA DB
S703
SEARCH WAS SUCCESSFUL?
YES
NO
S704
TRANSMIT CONFIRMATION FAILURE DATA
S603
RECEIVE CONFIRMATION FAILURE DATA
S604
DISPLAY CONFIRMATION FAILURE DATA
S801
CALCULATE POINT
S802
UPDATE FAVORED POINT DB
S803
TRANSMIT POINT DATA
S901
RECEIVE POINT DATA
S902
DISPLAY POINT DATA
END

PTO/SB/106 (8-96)
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Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Declaration and Power of Attorney For Patent Application

特許出願宣言書及び委任状

Japanese Language Declaration

日本語宣言書

下記の氏名の発明者として、私は以下の通り宣言します。

As a below named inventor, I hereby declare that:

私の住所、私書箱、国籍は下記の私の氏名の後に記載された通りです。

My residence, post office address and citizenship are as stated next to my name.

下記の名称の発明に関して請求範囲に記載され、特許出願している発明内容について、私が最初かつ唯一の発明者（下記の氏名が一つの場合）もしくは最初かつ共同発明者であると（下記の名称が複数の場合）信じています。

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

METHOD, SYSTEM, AND APPARATUS FOR ACCEPTING TRANSACTION RESERVATION, AND RECORDING MEDIUM

上記発明の明細書（下記の欄でx印がついていない場合は、本書に添付）は、

the specification of which is attached hereto unless the following box is checked:

☐ __月__日に提出され、米国出願番号または特許協定条約国際出願番号を_____とし、
（該当する場合）_____ に訂正されました。

☐ was filed on _____
as United States Application Number or
PCT International Application Number
_____ and was amended on
_____ (if applicable).

私は、特許請求範囲を含む上記訂正後の明細書を検討し、内容を理解していることをここに表明します。

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

私は、連邦規則法典第３７編第１条５６項に定義されるとおり、特許資格の有無について重要な情報を開示する義務があることを認めます。

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

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私は、米国法典第３５編１１９条(a)-(d)項又は３６５条(b)項に基き下記の、米国以外の国の少なくとも一ヵ国を指定している特許協力条約３６５(a)項に基ずく国際出願、又は外国での特許出願もしくは発明者証の出願についての外国優先権をここに主張するとともに、優先権を主張している、本出願の前に出願された特許または発明者証の外国出願を以下に、枠内をマークすることで、示しています。

I hereby claim foreign priority under Title 35, United States Code, Section 119 (a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)
外国での先行出願

(Number) (番号)	(Country) (国名)	(Day/Month/Year Filed) (出願年月日)	Priority Not Claimed 優先権主張なし
2000-074889	Japan	16/03/2000	☐
			☐

私は、第３５編米国法典１１９条(e)項に基いて下記の米国特許出願規定に記載された権利をここに主張いたします。

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below.

(Application No.) (出願番号)	(Filing Date) (出願日)	(Application No.) (出願番号)	(Filing Date) (出願日)

私は、下記の米国法典第３５編１２０条に基いて下記の米国特許出願に記載された権利、又は米国を指定している特許協力条約３６５条(c)に基ずく権利をここに主張します。また、本出願の各請求範囲の内容が米国法典第３５編１１２条第１項又は特許協力条約で規定された方法で先行する米国特許出願に開示されていない限り、その先行米国出願書提出日以降で本出願書の日本国内または特許協力条約国際提出日までの期間中に入手された、連邦規則法典第３７編１条５６項で定義された特許資格の有無に関する重要な情報について開示義務があることを認識しています。

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s), or 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of application.

(Application No.) (出願番号)	(Filing Date) (出願日)	(Status: Patented, Pending, Abandoned) (現況：特許許可済、係属中、放棄済)

私は、私自身の知識に基ずいて本宣言書中で私が行なう表明が真実であり、かつ私の入手した情報と私の信じるところに基ずく表明が全て真実であると信じていること、さらに故意になされた虚偽の表明及びそれと同等の行為は米国法典第１８編第１００１条に基ずき、罰金または拘禁、もしくはその両方により処罰されること、そしてそのような故意による虚偽の声明を行なえば、出願した、又は既に許可された特許の有効性が失われることを認識し、よってここに上記のごとく宣誓を致します。

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Japanese Language Declaration
(日本語宣言書)

委任状： 私は下記の発明者として、本出願に関する一切の手続きを米特許商標局に対して遂行する弁理士または代理人として、下記の者を指名いたします。（弁護士、または代理人の氏名及び登録番号を明記のこと）

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith *(list name and registration number)*

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（第三以降の共同発明者についても同様に記載し、署名をすること）

(Supply similar information and signature for third and subsequent joint inventors.)